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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,999	01/30/2004	Srinivasan Chandrasekar	A4-1719	1998
27127	7590	10/19/2006	EXAMINER	
HARTMAN & HARTMAN, P.C. 552 EAST 700 NORTH VALPARAISO, IN 46383			MAI, NGOCLAN THI	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/707,999	Applicant(s) CHANDRASEKAR ET AL.	
	Examiner Ngoclan T. Mai	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-25 is/are pending in the application.
- 4a) Of the above claim(s) 3,7-12,15 and 17-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,13,14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 1, 2, 4, 6, 13, 14, and 16 are currently under examination.

Claim Objections

Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In the present instance, claim 4 recites the broad recitation "less than 500 nm", which depends on instant claim 1, and instant claim 1 recites "... about 30 to less than 500 nm" which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6, 13, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lavernia (US Patent 5,939,146).

'146 discloses a product consisting of polycrystalline chips wherein the chips have nanocrystalline microstructures (abstract) and being formed of a material chosen from the group consisting of metals and metal alloys (col. 6, lines 49-51), intermetallic materials (col. 6, lines 27-28), and ceramic materials (col. 5, lines 60-61 and col. 6 lines 12-13), wherein the chips in the instant invention are produced by a machining operation so as to be in the form of ribbons, wires, filaments, and/or platelets, wherein if the product consists essentially of the chips, the chips are held together by consolidation and the product is a monolithic material consisting essentially of nanocrystalline.

Although '146 does not specifically disclose that the particles are in the nanometer range of 30 to less than 500 nm, but one skilled in the art would understand what is meant by the '146 patent when nanoscale is discussed. Due to the nature of the term "nanoscale", then at least obvious due to the broadness of the instantly disclosed range. The value of 17 nm disclosed by the reference at col. 11, lines 47-48 appears to be just an example as the specification is not so limited and broadly discloses the use of nanoscale particles. At col 11, lines 8-10, '146 discloses that the disperoids are from 50-300 nm. It should be pointed out that the instant application claims that the chips are held together by consolidation and not chips alone. Therefore, in the absence of factual evidence, the claimed product would not be materially different from the nanocrystalline coating of Lavernia ('146).

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Response to Arguments

Applicant's arguments, see pages 8 and 9, filed June 7, 2006, with respect to the rejection(s) of claim(s) 1, 2, 4, and 6 based on Lavernia ('146) under 35 U.S.C. 102 (b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made for obviousness in view of Lavernia ('146).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

Ngoc Lan Mai
NGOCLAN MAI
PRIMARY EXAMINER